

## Background

The opioid epidemic has greatly impacted Maine with over 2700 people dying due to opioid overdose between 2010-2019<sup>1</sup>. Prevalence of maternal Opioid Use Disorder (OUD) and Neonatal Opioid Withdrawal Syndrome (NOWS) in Maine is among the highest in the US<sup>2</sup>. In 2018, Neonatal Opioid Withdrawal Syndrome was reported to be 31.4 per 1000<sup>3</sup>, and maternal OUD 37.8 per 1000<sup>3</sup>. One study showed that opioid use in the month before conception led to a nearly 3-fold greater risk of poorly timed or unplanned pregnancy compared to no opioid use.<sup>4</sup>

The clinical community at Maine-Dartmouth Family Medicine Residency noted similar trends in pregnancy planning among our patient population. This study aims to better delineate the impact of OUD in this population to eventually inform interventions that could increase access to health services and ultimately improve maternal, fetal, and newborn health.

*We hypothesized that among reproductive-age birthing patients of two Central Maine family practices, those with a diagnosis of OUD experience a higher prevalence of unplanned pregnancy than those without this diagnosis.*



## Methods

### Retrospective observational cohort study of pregnant patients.

- Population: Patients of Family Medicine Institute (FMI) or Maine Dartmouth Family Practice (MDFP), located in Central Maine, who were born between 12/31/1975 and 01/01/1995, and had a positive pregnancy test between 01/01/2013, and 12/31/2015.

### Relevant data collected:

- Method of pregnancy diagnosis.
- Gravidity and parity.
- ICD-9/10 codes related to pregnancy and substance use, and mental health diagnoses.
- Health insurance.
- Medication for Opioid Use Disorder (MOUD) prescriptions and dosing.
- Pregnancy outcome.

### Two chart reviews performed on each pregnancy

- Initial reviews: family medicine residents, medical students, and undergraduate students.
- Second review: senior residents and the principal investigator.

## Results

**Work in progress:** To date, out of 1188 eligible pregnancies, 947 initial and 823 second chart reviews have been completed, and chi-square analysis was performed on a random sample of 250 pregnancies from charts that underwent review twice (women with OUD: N=69 and women without OUD: N=181).

### Findings:

- Significantly higher proportion of pregnancies among those with OUD were unplanned than among those without OUD (55.1% vs. 36.3%,  $p < 0.002$ ). *FIGURE 1.*
- Among pregnant patients with OUD, those who were not receiving medication for OUD were significantly more likely to have an unplanned pregnancy (64.7% vs. 45.7%,  $p < 0.02$ ). *FIGURE 2.*
- There appears to be a higher proportion of anxiety (61% vs. 39%) among pregnant patients with OUD vs. those without OUD. Both tobacco use and depression appear to be more common among pregnant patients with OUD compared to those without OUD. *FIGURE 3.*

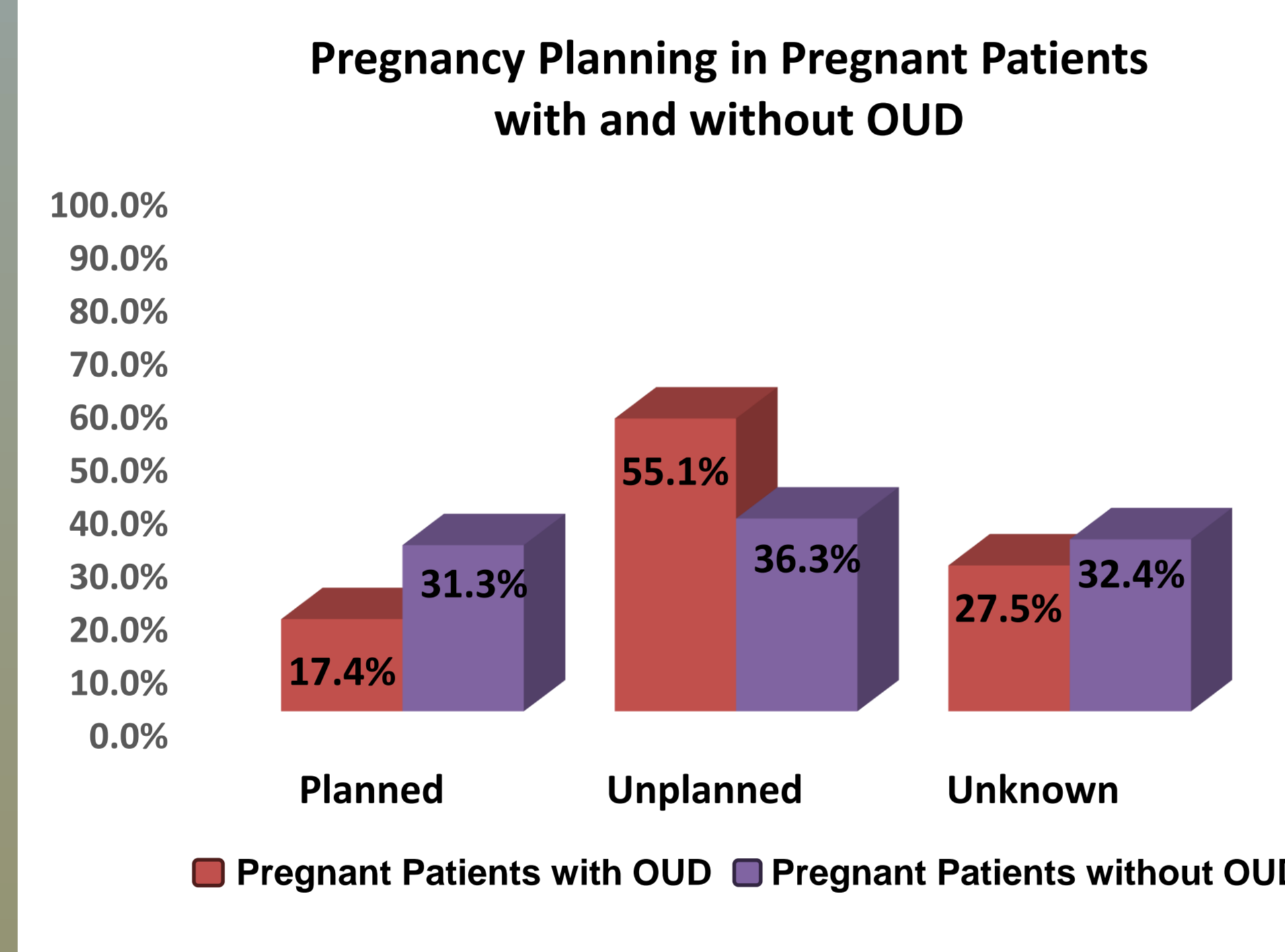


FIGURE 1

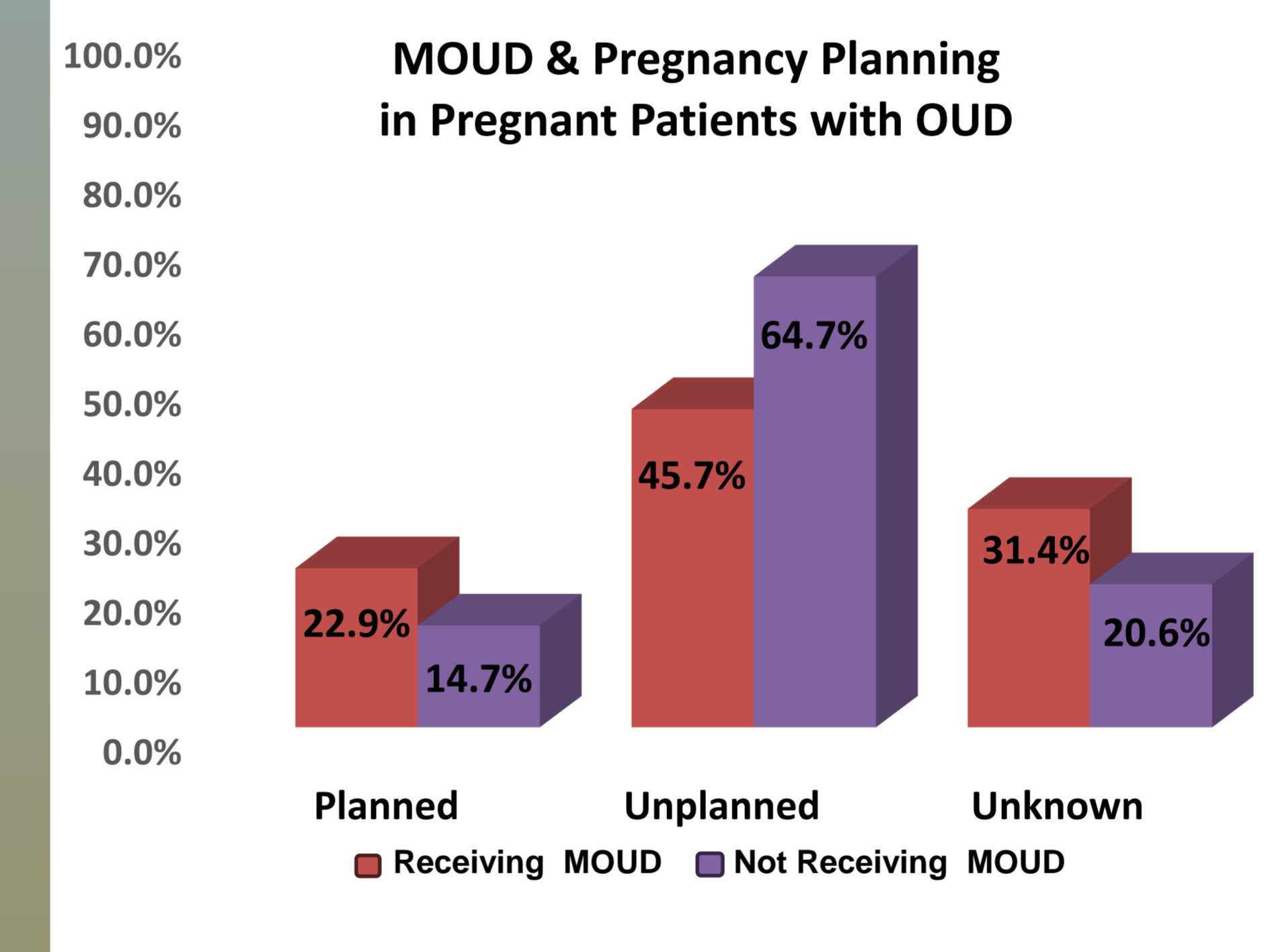


FIGURE 2

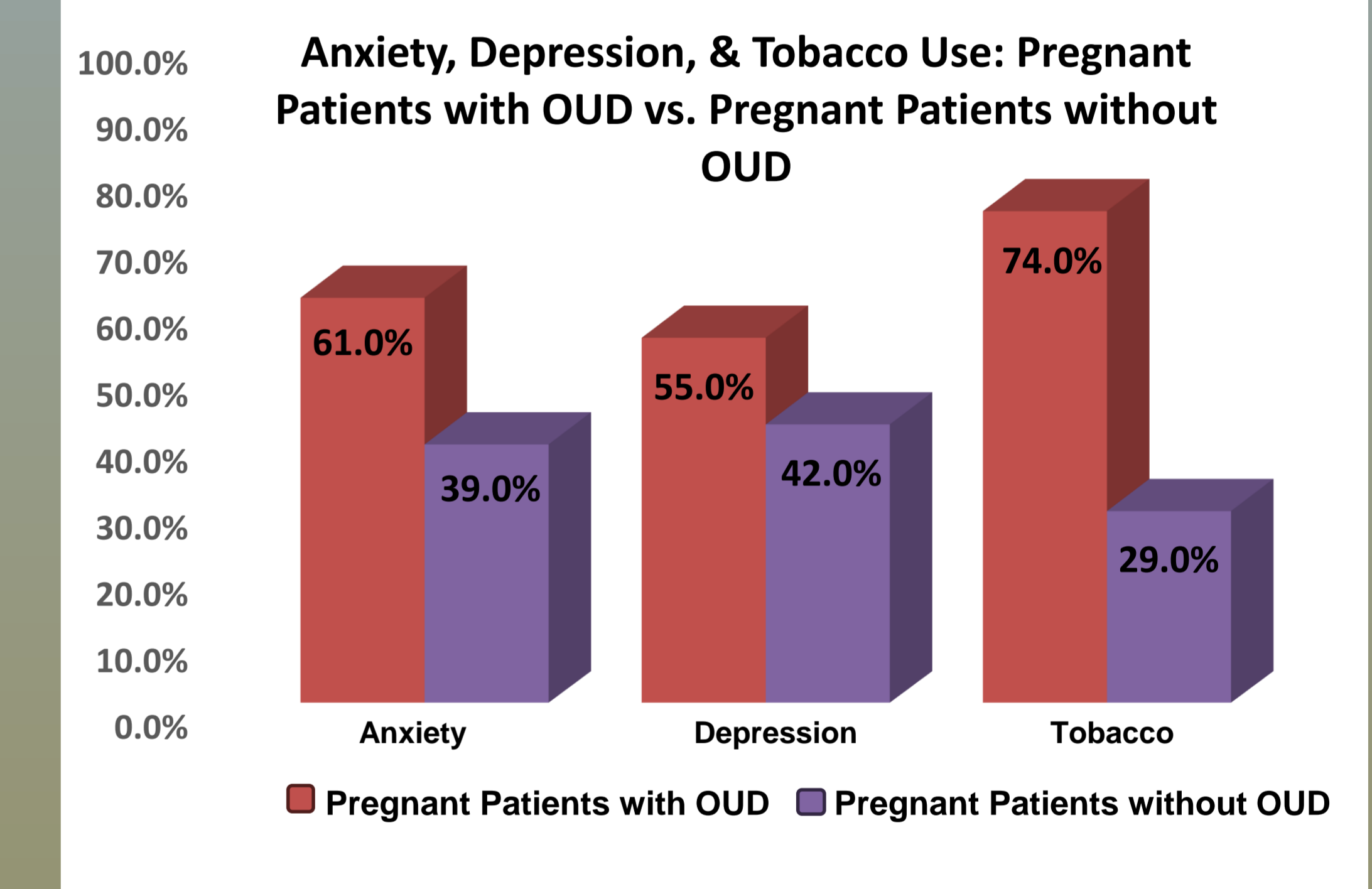


FIGURE 3

## Conclusion

There appears to be a strong relationship between Opioid Use Disorder and unplanned pregnancy. A limitation of current findings is that the analysis was performed on a partial data set. Analysis of the complete data set is pending.

### Implications of this study:

- Lower prevalence of unplanned pregnancy in pregnant people using MOUD suggests people with OUD may benefit from a more integrated approach to health care.
- Clinicians should be more intentional about discussions around family planning in people with OUD.

### Next Steps:

- Plans include completion of initial and second chart reviews, and analysis of the complete data set.
- A study publication.

## References

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